



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D6024-103
Job Sheet 187723



Part No: D6024-103

Job Qty: 51 pcs

Part Name: Crosstube Material



54 kg 2019-11-28

Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 12/12/18

Job Tracking No:

Due Date: 12/11/19

Created By: Chantal Lavoie

Type: Stock

Description:

Note: DWG REV A

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	51 pcs		12/11/19	0.00	0.00	Purchasing - 1		
							Purchasing - 2	Vn	NOV 28 2019
							Purchasing - 3		
110	Packaging 2-1 - Receive - B4B	51 pcs		12/11/19	0.00	0.00	Packaging2	vm	NOV 28 2019
120	QC 6	51 pcs		12/11/19	0.00	0.00	QC6	Vn	NOV 28 2019
140	Packaging 3-1 - Stock - B4B	51 pcs		12/11/19	0.00	0.00	Packaging3-2	JW	19-11-29
150	QC 21 - SA	51 pcs		12/11/19	0.00	0.00	QC21	DAS 21	NOV 29 2019 NOV 28 2019

Part Op 100 - Issue P/O: PO 042036 a) Order as per Dwg D6024 b) Material cert's is required
 Descriptions: 110 - (Receive & Inspect for Damage & Mat'l Certs) Ensure material certification is attached
 120 - (QC6- All purchased or subcontracted products) Ensure Material certification comply to Dwg
 140 - (Identify as per dwg & Stock Location: H411)
 150 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6024-103P	Crosstube Material	51 pcs (1 ea)	100-Purchasing	S228354

Job Allocations

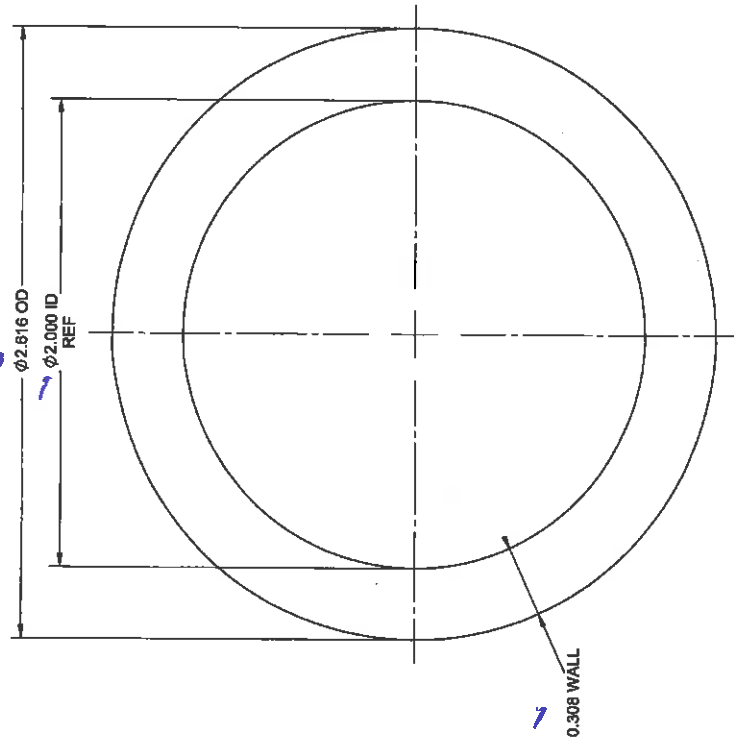
Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	D6024-103P	51	54	0

Part Specifications

Specifications could not be found.

Plex 11/28/19 2:26 PM Dart.Lavoie.Chantal

SPECIFICATION CONTROL DRAWING



D6024-XXX CROSSTUBE MATERIAL

WHERE XXX IS LENGTH IN INCHES
EG. 103" LONG TUBE: D6024-103

NOTES:
1) MATERIAL: 2.816 OD X 0.308 WALL 7075-T6/T6511 (WW-T-7007 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE
MINIMUM TENSILE STRENGTH = 77 KSI
MINIMUM YIELD TENSILE STRENGTH = 66 KSI

2) FINISH: NONE
3) TOLERANCES: PER ASTM B210 AS FOLLOWS:
O.D.: ± 0.008 MEAN (± 0.016 INCLUDING OVALITY)
WALL: ± 0.011 MEAN (± 0.031 INCLUDING ECCENTRICITY)
LENGTH: XXX $\pm 0.188/0.000$
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH

4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.

6) BREAK SHARP EDGES: N/A
7) IDENTIFICATION: NONE
8) WEIGHT: N/A

RELEASED
R 2015-11-04
EW 542

APPROVED

A		NEW ISSUE		AP		BY		DATE	
REV.		DESCRIPTION		AP		BY		DATE	
DESIGN		DART AEROSPACE LTD		AP		HAWKESBURY, ONTARIO, CANADA		REV. A	
DRAWN		DART AEROSPACE LTD		AP		HAWKESBURY, ONTARIO, CANADA		SHEET 1 OF 1	
CHECKED		D6024		AJS		JLM		SCALE	
MFG. APPR.		D6024		JLM		WM		NTS	
APPROVED		CROSSTUBE MATERIAL		DS		DATE		15.10.13	
DE APPR.		CROSSTUBE MATERIAL		DS		DATE		15.10.13	
DATE		15.10.13		15.10.13		15.10.13		15.10.13	

THE DOCUMENT IS THE PROPERTY OF DART AEROSPACE LTD. IT IS TO BE USED FOR THE PURPOSES SPECIFIED IN THE ORDER AND IS NOT TO BE REPRODUCED OR COPIED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO042036**

Supplier: KAI001-VU
Kaiser Aluminum
6573 W WILLIS ROAD
CHANDLER, AR 85226 USA
Phone: 520 796 1097
Fax: 520 796 0596

PO No: PO042036

PO Date: 12/12/18

Due Date: 7/10/19

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Lavoie, Chantal
clavoie@dartaero.com

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pynt Terms: Net 30

Freight Terms:

Special Comments: quote no. 640153

EMAILED
DEC 12 2018

Items

Line Item	Job	Part	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	187723	D6024-103P			Crosstube Material AS PER DWG D6024 REV. A	Firmed	-	7/10/19	44 pcs	0 pcs	44 pcs	\$261.77/pcs	\$11,517.88
Line Item Note: EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE OUTSIDE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS Grand Total: \$11,517.88													

Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A007 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION MAINTAINED BY SUPPLIER)

A012 CHEMICAL AND PHYSICAL TEST REPORTS

A016 PERSONNEL QUALIFICATION

A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

CD

Plex 12/12/18 2:49 PM dart.lavoie.chantal

10/22/19

KAISER ALUMINUM FABRICATED PRODUCTS, LLC
PACKING LIST

PAGE 1

KAISER ALUMINUM
6573 W. WILLIS ROAD
BOX 5011
CHANDLER AZ 85226

SOLD TO

DART AEROSPACE LTD
HAWKESBURY ON K6A 1K7

DART AEROSPACE LTD
1270 ABERDEEN
STREET

INSIDE SALES REP

FACIO

BILL OF LADING
SHIP DATE
CARRIER
LOAD NUMBER
TOTAL GROSS WT

235122
10/22/19 SHIPMENT NBR- 225241 0002
FED EX FREIGHT
PB69
1329 LBS.

ON K6A 1K7

SHIP ITEM RELEASE	ITEM	DESCRIPTION	P.O. NUMBER	LOT NUMBER	PACKAGE NUMBER	PACK PIECES	GROSS WGT	NET WGT	FOOTAGE	BACK ORDER	INHOUSE DATE
1	225241	001 SPIRIT-401126 YOUR PART# D6024-103P 50174 2.7067#/FT 4000	COMPLETE P0042036	*50174-006 Dash 0001	M000176591	19	466	441	163.08		09/11/19
2		7075 T6 103 IN +.1880 -.0000 TOL 7075 T6 2.616" OD X .308" WALL HA EST		50174-006 Dash 0001	M000176592	19	466	441	163.08		
3				50174-006 Dash 0001	M000176593	16	397	372	137.33		
TOTAL:											
							54	1329	1254	463.49	
							TOTAL NET WT		1254	FOOTAGE	463.49

* MATERIAL CERTIFICATION REQUIRED FOR THIS LOT NUMBER.

KAISER ALUMINUM FABRICATED PRODUCTS

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
6573 W. WILLIS ROAD
CHANDLER, AZ 85226

CUSTOMER PO NUMBER: PO042036-1		CUSTOMER PART NUMBER: D6024-103P		PRODUCT DESCRIPTION: 7075 T6 2.616 OD X .308 WALL HA EST	
KAISER ORDER NUMBER: 229241	LINE ITEM: 001	SHIP DATE: 10/22/2019	KAISER LOT NUMBER: 50174-006	ALLOY: 7075	TEMPER: T6
WEIGHT SHIPPED: 1254.000 LB	QUANTITY: 54.000 PCS	B/L NUMBER: 235122	DIAM/DAF/THKNS:	WIDTH:	LENGTH: 8.583 FT
SHIP TO: DART AEROSPACE LTD 1270 ABERDEEN STREET HAWKESBURY, ON K6A 1K7 CANADA			SOLD TO: DART AEROSPACE LTD 1270 ABERDEEN STREET HAWKESBURY, ON K6A 1K7 CANADA		

Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CON% IACS	BEND
50174-006	0001	0001	85.8	77.6	8.0	N/A	N/A	N/A
50174-006	0001	0002	86.5	77.4	12.0	N/A	N/A	N/A

Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.40	0.50	2.00	0.30	2.90	0.28	6.10	0.20	NA	NA	NA	0.05	0.15
Minimum	0.00	0.00	1.20	0.00	2.10	0.18	5.10	0.00	NA	NA	NA	0.00	0.00
43881	.08	.15	1.62	.02	2.47	.21	5.85	.03	.00	.00	.02	.01	.02

Applicable Requirements:

AMS-QQ-A-200/11 Also conforms to QQ-A-200/11
No Weld Repair. Mercury Free.

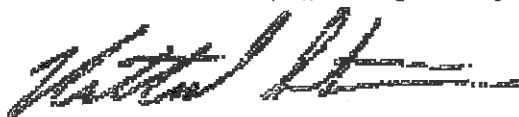
Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC ('Kaiser') hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms & conditions of sale. Test reports are on file subject to examination.

Nathaniel Stevens, Quality Manager



Plant Serial: 00033049

Kaiser Order Number: 229241

Line Item: 001

EXTRUSION INSPECTION SHEET



		SIDE A		SIDE B			Measurement unit				Symbol		"		ULTRA SONIC MEASUREMENTS				
TUBE #	TOTAL LENGTH	DIA		DIA			INSIDE DIA	wall thickness measured w/vern	Straightness at 12" in middle	Rockwell Reading	LOCATION on tube	R1	R2	R3	R4				
		R1	R2	R1	R2	R3													
DWG										N/A	Middle	N/A							
1	103"	2.617	2.618	2.612	2.620	2.611	.303	.306	.004	N/A	Middle	.296	.295	.303	.296				
2	103"	2.622	2.622	2.603	2.604	2.613	.303	.306	.005	N/A	Middle	.293	.294	.299	.301				
3	103"	2.609	2.612	2.613	2.614	2.606	.300	.303	.002	N/A	Middle	.296	.295	.296	.296				
4	103"	2.614	2.614	2.616	2.616	2.607	.301	.303	.002	N/A	Middle	.297	.296	.296	.297				
5	103"	2.617	2.618	2.618	2.620	2.610	.300	.306	.004	N/A	Middle	.297	.298	.296	.296				
6	103"	2.604	2.604	2.610	2.611	2.603	.299	.308	.005	N/A	Middle	.303	.296	.297	.297				
7	103"	2.597	2.597	2.616	2.618	1.997	.300	.310	.002	N/A	Middle	.296	.300	.295	.294				
8	103"	2.621	2.618	2.622	2.625	2.609	.305	.305	.004	N/A	Middle	.303	.301	.299	.299				
9	103"	2.613	2.614	2.613	2.615	2.609	.299	.303	.002	N/A	Middle	.303	.299	.303	.297				
10	103"	2.614	2.614	2.615	2.616	2.608	.303	.306	.005	N/A	Middle	.304	.301	.301	.299				
11	103"	2.617	2.615	2.617	2.618	2.604	.303	.308	.004	N/A	Middle	.305	.300	.304	.302				
12	103"	2.617	2.617	2.612	2.616	2.609	.303	.306	.003	N/A	Middle	.297	.299	.307	.299				
13										N/A	Middle								
14										N/A	Middle								
15										N/A	Middle								
16										N/A	Middle								
PART #		P/O#					BATCH # S228354					Notes:							

D6024-103

Part# P0042036

DAS 81 9-89

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D6024-103
 DATE: NOV 28 2019

PO / BATCH NO.: P0042036 /
S228354

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 54 pcs
 QUANTITY INSPECTED: 54 pcs
 QUANTITY REJECTED: -

THICKNESS ORDERED: 2.616 OD
 THICKNESS RECEIVED: 2.616 OD
 SHEET SIZE ORDERED: -
 SHEET SIZE RECEIVED: -

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	(Y) N	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	(Y) N	
CORRECT MATERIAL PER M-DRAWING	(Y) N	QQ-A-20011
CORRECT THICKNESS	(Y) N	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	(Y) N	HT: S0174-006 0001
CORRECT MATERIAL IDENTIFICATION	(Y) N	
CORRECT M# ON THE MATERIAL	(Y) N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: _____ DATE: <u>NOV 28 2019</u>	SIGNED OFF BY: _____ DATE: _____

DAS
81
9-88

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in